BASIS FOR THE AMENDMENT

Claim 39 has been canceled.

The limitations of Claim 39 have been included in Claims 8 and 27. The amendment of Claims 8 and 27 is further supported at paragraphs [0035-0036] of the published specification (US 2006/0211815).

New Claims 47-51 are supported by original Claims 40-44.

New Claims 52 and 53 are supported at page 9, lines 28 and 29 of the specification.

No new matter is believed to have been added by entry of this amendment. Entry and favorable reconsideration are respectfully requested.

Upon entry of this amendment Claims 8, 9 and 21-38, 40-53 will now be active in this application.

REMARKS

Applicants respectfully request reconsideration of the application, as amended, in view of the following remarks.

Applicants wish to thank Examiner Niland for the helpful and courteous discussion with Applicants' Representative on February 27, 2008. Regarding the molecular weight of the polyethylene glycol it was noted that it refers to number average as supported, for example at page 16, line 6 of the specification. DIN 53240 describes the determination of the OH number. The number average molecular weight can be determined based on the OH number.

It was discussed to claim in Claims 21 and 29: "500 to 2000 g/mol". The claims have been so amended.

It was discussed to include Claim 39 in Claims 8 and 27. The claims have been so amended.

Based on the above amendment the remaining rejections are over US 3639315 (Rodriguez) and over WO 02/64657 (Licht) in view of US 5959027 (Jakubowski) in view of US 4046729 (Scriven) which are further addressed below. The following is intended to expand on the discussion with the Examiner.

The rejection of Claims 8, 9 and 21-46 under 35 U.S.C. § 112, 2nd paragraph, is traversed.

The molecular weight of the polyethylene glycol is a number average as supported, for example at page 16, line 6, of the specification. DIN 53240 describes the determination of the OH number. A translation of DIN 53240 is attached herewith. The number average molecular weight can be determined based on the OH number using the following equation:

$Mn = (M_{OH} \times 100) / (\%OH)$.

Thus, this rejection should be withdrawn.

The rejection and objection of Claims 21 and 29 are obviated by the amendment of these claims.

The synthesis component c) has been further defined in Claims 8 and 27 by including the limitations of Claim 39. Thus, this rejection should be withdrawn.

The rejection of Claims 27-29, 32-34, 37 and 46 under 35 U.S.C. § 102(b) over WO 02/064657 and the rejection of Claims 27-34, 37, 38 and 46 under 35 U.S.C. § 103(a) over WO 02/064657 are obviated by the amendment of Claim 27 which now includes the limitations of Claim 39. Notably, Claim 39 was not rejected over WO 02/064657.

The rejection of Claims 8, 9 and 21-46 under 35 U.S.C. § 103(a) as obvious over WO 02/064657 (US equivalent 2004/0077777) in view of US 5,959027 and US 4046729 is respectfully traversed.

The present invention as set forth in **amended Claim 8** relates to a process for preparing a primary dispersion, said process comprising:

reacting the following components a), b1), **and c)** and optionally b2), optionally b3), and optionally b4) in the presence of water, thereby obtaining an aqueous primary dispersion, which comprises at least one polyurethane;

wherein

a) is at least one polyisocyanate,

b1) is at least one polyol comprising a structural unit $-[-CH_2-CH_2-O-]_w-$ one or more times, wherein said structural unit $-[-CH_2-CH_2-O]_w-$ is obtained from a synthesis component selected from the group consisting of ethylene glycol, polyethylene glycol having a molar mass of between 106 and 2000, and ethylene oxide, **wherein w is a positive integer from 10 to 200**;

b2) is at least one polyol other than b1),

b3) is at least one compound containing at least two isocyanate-reactive groups selected from the group consisting of thiol groups and primary and secondary amino groups,

b4) is at least one monofunctional monomer having an isocyanate-reactive group, and

c) is at least one ionic or potentially ionic synthesis component,

wherein the component c) is represented by the general formula RG-R^1-DG,

wherein RG is at least one isocyanate reactive group,

DG is at least one actively dispersing group, and

R^1 is an aliphatic, cycloaliphatic or aromatic radical comprising 1 to 20 carbon atoms;

wherein

the fraction of the structural units –[–CH_2–CH_2–O–]–, calculated at 44 g/mol, in the polyol b1) is from 10 to 90% by weight, and

the fraction of the structural units –[–CH_2–CH_2–O–]–, calculated at 44 g/mol, in the sum of the components a) + b1) + b2) + b3) + b4) + c) is at least 3% by weight.

Amended Claim 27 relates to a process for preparing a primary dispersion, said process comprising:

reacting the following components a), b1), and optionally b2), optionally b3), optionally b4) and optionally c) in the presence of water, **thereby obtaining an aqueous primary dispersion, which comprises at least one polyurethane;**

wherein

first all components are mixed with water, to obtain an emulsion having a water phase,

then said emulsion is heated,

after the reaction temperature has been reached, a catalyst is added via the water phase of said emulsion, and

wherein

a) is at least one polyisocyanate,

b1) is at least one polyol comprising a structural unit $-[-CH_2-CH_2-O-]_w-$ one or more times, wherein said structural unit $-[-CH_2-CH_2-O]_w-$ is obtained from a synthesis component selected from the group consisting of ethylene glycol, polyethylene glycol having a molar mass of between 106 and 2000, and ethylene oxide, **wherein w is a positive integer from 10 to 200**;

b2) is at least one polyol other than b1),

b3) is at least one compound containing at least two isocyanate-reactive groups selected from the group consisting of thiol groups and primary and secondary amino groups,

b4) is at least one monofunctional monomer having an isocyanate-reactive group, and

c) is at least one ionic or potentially ionic synthesis component,

wherein the component c) is represented by the general formula RG-R^1-DG,

wherein RG is at least one isocyanate reactive group,

DG is at least one actively dispersing group, and

R^1 is an aliphatic, cycloaliphatic or aromatic radical comprising 1 to 20 carbon atoms;

wherein

the fraction of the structural units $-[-CH_2-CH_2-O-]-$, calculated at 44 g/mol, in the polyol b1) is from 10 to 90% by weight, and

the fraction of the structural units $-[-CH_2-CH_2-O-]-$, calculated at 44 g/mol, in the sum of the components a) + b1) + b2) + b3) + b4) + c) is at least 3% by weight.

It is an object of the present invention to provide primary dispersions which comprise polyurethane, which are finely divided without the use of high shear forces, and which make it possible not only for the raw materials to be emulsified finely but also for the products to be dispersed. See page 2, 1st full paragraph of the specification.

However, WO 02/064657 (US equivalent 2004/0077777) in view of US 5,959027 and US 4046729 fail to disclose or suggest the process of producing the aqueous primary dispersions as claimed in Claims 8 and 27.

According to US 2004/0077777, paragraph [0014] "incorporation of ionically or non-ionically hydrophilic groups" is **not necessary**. Thus, there is no motivation to combine with other documents disclosing emulsifiers for polyisocyanates in US 2004/0077777 since this reference teaches away from doing so.

Further, US 4046729 discloses "the reaction product of ethylene glycol with a mixture of propylene oxide and ethylene oxide" (col. 8, line 49) as well as salt groups which may be anionic or cationic (col. 11, lines 1 to 36). However, the polyalkylene ether polyol according to US 4046729 contains **2 to 6** alkylene oxide units (col. 8, line 46) while the polyols of the present invention contain more alkylene oxide units than US 4046729, namely **10 to 200**.

US 5,959027 is silent about mixed polyalkylene oxides.

Thus, even if WO 02/064657 (US equivalent 2004/0077777) andUS 5,959027 and US 4046729 were combined, the present invention does not result.

Therefore, the rejection of Claims 8, 9 and 21-46 under 35 U.S.C. § 103(a) as obvious over WO 02/064657 in view of US 5,959027 and US 4046729 is believed to be unsustainable as the present invention is neither anticipated nor obvious and withdrawal of this rejection is respectfully requested.

The rejection of Claims 8, 9, 21, 24, 25, 27-29, 32, 33, 35-40 and 45-46 under 35 U.S.C. § 102(b) over US 3,639,315 is respectfully traversed.

US 3,639,315 discloses simply "adding an organic isocyanate directly to the water solution or dispersion" of a hydroxyl-containing polymer (col. 2, lines 10 to 15). Isocyanates are disclosed by US 3,639,315 from col. 3, line 48 to col. 4, line 16. However, none of these isocyanates are in any way made water-emulsifiable or modified in any other fashion.

US 3,639,315 therefore discloses the simplest way of preparing a two-component polyurethane coating by mixing a hydroxyl-containing resin with a simple isocyanate.

In contrast, the polyurethanes according to the present invention are modified with further compounds b1) and c) [and optionally b2) and/or b3) and/or b4)] in order to make them water-emulsifiable. The presence of compounds b1) and c) renders the polyurethanes according to the invention much more easily water-emulsifiable than the simple isocyanates according to US 3,639,315.

Furthermore, by incorporating Claim 39 into Claims 8 and 27, it is clear that compound c) is not a resinous compound as disclosed in US 3,639,315 but a compound with a low molecular weight (see definition of R^1).

Therefore, the rejection of Claims 8, 9, 21, 24, 25, 27-29, 32, 33, 35-40 and 45-46 under 35 U.S.C. § 102(b) over US 3,639,315 is believed to be unsustainable as the present invention is neither anticipated nor obvious and withdrawal of this rejection is respectfully requested.

This application presents allowable subject matter, and the Examiner is kindly requested to pass it to issue. Should the Examiner have any questions regarding the claims or otherwise wish to discuss this case, he is kindly invited to contact Applicants' below-signed representative, who would be happy to provide any assistance deemed necessary in speeding this application to allowance.

Respectfully submitted,

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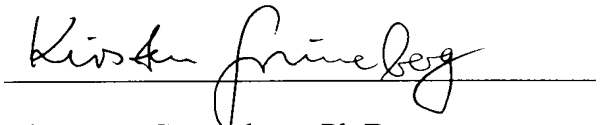

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